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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BIBBINS, LATANYA

ART UNIT

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2627

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,941	Applicant(s) KURODA, KAZUO	
	Examiner LaTanya Bibbins	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-17 is/are rejected.
- 7) ☒ Claim(s) 12, 13, and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Preliminary Amendment

2. Receipt is acknowledged of the preliminary amendment filed on March 22, 2006. In the amendment, claims were 1-11 were canceled and claims 12-17 were added. Currently claims 12-17 are pending.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the rectangular boxes shown in Figures 1, 8, and 9 should be provided with descriptive text labels. For example, providing element 12 of Figure 1 with a "buffer" label is suggested.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

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changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

- 4.** The disclosure is objected to because of the following informalities:

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Appropriate correction is required.

Claim Objections

- 5. Claims 12, 13, and 15** are objected to because of the following informalities:

Claims 12, 13, and 15 recite a "plate-like laser beam." It is unclear what is meant by a "***plate-like***" laser beam,. Appropriate correction is required.

Claim Rejections - 35 USC § 103

- 6.** The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al. (US Patent Number 7,023,786 B2) in view of Braitberg et al. (US Patent Number 3,976,354).

Regarding claim 12, Itoh discloses an information recording apparatus for recording record information onto a recording medium having an optically recordable recording surface (Figure 2), comprising:

a laser light source (Figure 2 element 11);

a converting optical system for converting a laser beam emitted from said laser light source to a plate-like laser beam whose cross section extends linearly and for emitting the laser beam such that a direction extending linearly is along the recording surface (see the beam expander Figure 2 element 14);

a recording optical system for recording the record information onto the recording medium, by irradiating the recording surface with reference light based on the laser beam emitted from said laser light source while irradiating the recording surface with the spatial modulated plate-like laser beam as signal light (Figure 2 elements 12a and 12b and the discussion in column 4 lines 1-9); and

a displacing device for displacing the recording medium relative to said recording optical system such that irradiation positions of the signal light and the reference light are relatively displaced on the recording surface (see the discussion in column 5 lines 44-47),

said recording optical system including:

a splitting optical system for splitting the laser beam emitted from said laser light source into the signal light and the reference light in a previous step of said converting optical system (see the beam splitter Figure 2 element 13); and

a combining optical system for combining the one-dimensional spatial modulated signal light and the reference light to a same optical path, in a subsequent step of said one-dimensional spatial modulating device (see the optical system of Figure 2 and the discussion in column 4 line 52-61).

While Itoh teaches a spatial modulating device (Figure 2 element 15), Itoh does not specifically teach that the spatial modulating device is one dimensional.

Braitberg, however, discloses a one-dimensional spatial modulating device for performing one-dimensional spatial modulation in the direction extending linearly with respect to the plate-like laser beam, on the basis of the record information (see the discussion regarding the one dimensional page composer column 4 lines 35-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the one dimensional spatial modulating device of Braitberg into the information recording apparatus of Itoh. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to simplify the design as suggested by Braitberg in column 4 lines 39-51).

Regarding claim 13, the combination of Itoh and Braitberg further disclose wherein said splitting optical system splits the reference light such that the optical path

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of the reference light and the plate-like laser beam are located side-by-side as viewed from the recording surface (see the optical paths of the signal and reference beams in Figure 2 of Itoh).

Regarding claim 14, the combination of Itoh and Braitberg further disclose wherein said recording optical system further comprises

a splitting optical system for splitting the laser beam emitted from said laser light source into the signal light and the reference light in a previous step of said converting optical system (see the beam splitter of Itoh, Figure 2 element 13), and

the one-dimensional spatial modulated signal light and the reference light are combined to a same optical path and irradiated to the recording surface (see the optical system of Itoh, Figure 2 and the discussion in column 4 line 52-61).

Regarding claim 15, the combination of Itoh and Braitberg further disclose wherein said splitting optical system splits the reference light such that the optical path of the reference light and the plate-like laser beam are located side-by-side as viewed from the recording surface (see the optical paths of the signal and reference beams in Figure 2).

Regarding claim 16, the combination of Itoh and Braitberg further disclose wherein the reference light is emitted from said laser light source together with the signal light (see Itoh Figure 2 elements 11 and 12), and irradiated to the recording surface through said converting optical system (see the optical system of Itoh in Figure 2), said one-dimensional spatial modulating device (see the discussion regarding the

one dimensional page composer Braitberg column 4 lines 35-38), and said recording optical system (see the optical system of Itoh in Figure 2).

Regarding claim 17, the combination of Itoh and Braitberg further disclose wherein an axis in a longitudinal direction of said one-dimensional spatial modulating device is crossed with a disc radial direction (see the one dimensional page composer in Braitberg Figure 24 and the discussion regarding the one dimensional page composer column 4 lines 35-38, also note the discussion in column 5 lines 15-17).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaTanya Bibbins whose telephone number is (571)270-1125. The examiner can normally be reached on Monday through Friday 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LaTanya Bibbins/
Examiner, Art Unit 2627

/Wayne Young/
Supervisory Patent Examiner, Art Unit 2627